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Mr. John H. Bosshart
Director Track Standards & Procedures Engineering
The Burlington Northern and Santa Fe Railway
Network Operations Center, 3rd Floor, 2600 Lou Menk Drive
Fort Worth, TX 76131-2830

Dear Mr. Bosshart:

PolySum Technologies would like to provide a quantity of 100 trapezoidal "TUFF-Tie" Engineered Thermoplastic Railroad Crossties to be installed in TTCT's FAST HAL program for testing and further observation. We are hopeful that as a member of the HAL Research Committee you will present this proposal to the committee to facilitate installation in the very near future.

PolySum's composite tie has passed TTCT's initial laboratory testing, including the 2-million cycle tie wear abrasion test. A copy of the report from the tie wear abrasion test is attached herewith. In addition to laboratory testing, the ties are performing well in a variety of applications, including heavy haul loads in curved track. A list of in-track installations, along with additional technical information, is included herewith for your review.

The "larger footprint" of the trapezoidal profile should prove to be beneficial in heavy axle load situations. An additional advantage of the composite plastic tie is its longer life and improved gauge-holding ability when compared to wood ties in severe applications and extreme environments, resulting in lower life cycle costs. For ease of installation, composite plastic ties can be interspersed with wood ties using standard tie insertion equipment and hardware. There are no disposal issues related to composite plastic ties, as they can be returned for a credit at the end of their useful life and then recycled into new crossties. In addition, this product addresses many of the performance and maintenance issues related to concrete ties—mainly rail seat abrasion.

For the purpose of the test section, either cut spikes or elastic fasteners can be used, or if you prefer, a new fastening system can be designed specifically for this test and future applications.

Although PolySum's trapezoidal tie was designed with an 8" top surface and a 12" bottom surface (with a 7" depth), the tie can be manufactured with a 9" top surface and a 10" bottom surface as required in the main line railroads' preliminary composite tie specifications. A pattern for lateral stability and to minimize tie uplift would be embossed on the bottom surface and both sides.

Testing of the composite plastic trapezoidal tie in the FAST HAL track should prove beneficial to the entire industry, and we look forward to the support of both the BNSF and the HAL Research Committee in this endeavor.

Yours very truly,

Linda Thomas
President